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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 09/520,032 | 03/06/00 | HODPMAN | T 49933574 |

IM22/0927

EXAMINER

GREGORY D. ALLEN
OFFICE OF INTELLECTUAL PROPERTY COUNSEL
3M INNOVATIVE PROPERTIES COMPANY
P O BOX 33427
ST PAUL MN 55133-3427

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 1722 | 18 |

DATE MAILED: 09/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/520,032 | HOOPMAN ET AL. |
| | Examiner | Art Unit |
| | Joseph Leyson | 1722 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nc address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 August 2001 and 18 September 2001.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 17,19-21,25-28,33-54,94-96,98-111 and 133-175 is/are pending in the application.

4a) Of the above claim(s) 133-175 is/are withdrawn from consideration.

5) Claim(s) 19 is/are allowed.

6) Claim(s) 17,20,21,25-28,33-54,94-96 and 98-111 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13,17.

4) Interview Summary (PTO-413) Paper No(s) _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

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1. Applicant's affirmation of the election with traverse of Group II, claims drawn to the production tool, in Paper No. 12 filed on 23 August 2001 and in Paper No. 16, filed on 18 September 2001 is acknowledged. The traversal is on the ground(s) that the inventions of Groups II and III can be readily evaluated in one search without placing undue burden on the Examiner, that a search of one group will reveal art to other groups since the groups are so interrelated, and that the method claims (Group III) should be rejoined with the product claims (Group II) in view of In re Ochiai. This is not found persuasive because the search and examination of both inventions would not be coextensive. The issues raised in the examination of apparatus claims are divergent from those raised in the examination of process claims. Further, while there may be some overlap in the searches of the two inventions, there is no reason to believe that the searches would be identical. Therefore, based on the additional work involved in searching and examining both distinct inventions together, restriction of the distinct inventions is clearly proper. As to the arguments relative to In re Ochiai, any method claims which include all the limitations of the product claims will be rejoined IF the product claims are allowed.

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The requirement is still deemed proper and is therefore made FINAL.

2. Newly added claims 133-175 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 25-28 and 94-96 are rejected under 35 U.S.C. 102(b) as being anticipated by Rochlis (-583).

Rochlis (-583: figs. 21 and 22) teaches a production tool suitable for use in manufacturing an abrasive article (col. 1, lines 50-56) which includes a plurality of cavities having geometric shapes, angles and dimensions. At least two of the cavities have different angles. Note that 9 cavities are shown with a first plurality of rectangular cavities, a second plurality of circular cavities, and a third plurality of triangular cavities defining 20 pairs of adjacent cavities, wherein 14 of the pairs have at least one dimension, such as _____

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base edge lengths, which is different between the two cavities of the pair. Thus, 70% of the pairs have at least one dimension which is different between the two cavities of the pair.

5. Claims 20, 21, 33, 34, 36-45, 47-54, 98, 99, 101-106 and 108-111 are rejected under 35 U.S.C. 102(b) as being anticipated by Rochlis(-583).

Rochlis(-583) teaches a production tool suitable for use in manufacturing an abrasive article (col. 1, lines 50-56) which includes a plurality of cavities having different geometric shapes, angles and dimensions. The production tool can be a coating roll (fig. 19) or an etched (engraved) metal roll (col. 3, lines 52-63; col. 13, lines 15-17 and 62-67). The production tool can have 9 cavities as shown in figs. 21 and 22 with a first plurality of rectangular cavities, a second plurality of circular cavities, and a third plurality of triangular cavities defining 20 pairs of adjacent cavities, wherein 14 of the pairs have at least one dimension, such as base edge lengths, which is different between the two cavities of the pair. Thus, 70% of the pairs have at least one dimension which is different between the two cavities of the pair. At least one of the angles or base edge lengths of the first plurality is different from all the angles or base edge lengths of the second plurality and of the third plurality. At least one of the angles or base edge

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lengths of the second plurality is different from all the angles or base edge lengths of the first plurality and of the third plurality.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 17, 20, 21, 33-54 and 98-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rochlis (=583).

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As to claims 20, 21, 33, 34, 36-45, 47-54, 98, 99, 101-106 and 108-111, the 102 rejection above is based upon the interpretation of the alternatives for the production tool disclosed by Rochlis(-583) as being anticipatory. If applicants believe that the disclosed alternatives are NOT anticipatory, then it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the production tool of Rochlis(-583) with the alternatives disclosed by Rochlis(-583) because Rochlis(-583) explicitly discloses that the production tool can be modified with such disclosed alternatives.

As to claim 17, Rochlis(-583) does not disclose the cavities having a material-included angle with a value from 20 to 90 degrees. Note that Rochlis(-583) discloses that the cavities can have pyramidal shapes (col. 13, lines 51-58). As to claims 35, 46, 100 and 107, Rochlis(-583) discloses a production tool having 3 different types of cavities defining three pluralities or groups of cavities (figs. 21 and 22), but does NOT explicitly disclose a fourth plurality or group of cavities having a fourth different type of cavity. However, Rochlis(-583) discloses that the production tool can have different sizes (col. 2, lines 66-70; col. 6, lines 17-22; col. 9, line 61, to col. 10, line 52) and discloses that the

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production tool can have a plurality of different types of cavities (col. 13, lines 29-35). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the cavities of Rochlis(-583) to have a material-included angle with a value from 20 to 90 degrees because such an angle would have been found due to routine engineering in finding operable parameters for the apparatus and/or in optimizing the apparatus, In re Aller, 105 USPQ 233 and/or because Rochlis(-583) discloses that the cavities can be of different sizes, or to modify the production tool to have four pluralities or group of cavities having four different types of cavity because Rochlis(-583) discloses that the production tool can have a plurality of different types of cavities and/or because Rochlis(-583: figs. 21 and 22) discloses a production tool example having not just two but three pluralities or groups of cavities having three different types of cavities.

8. The terminal disclaimer filed on 23 August 2001 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,129,540 has been reviewed and is accepted. The terminal disclaimer has been recorded.

9. Claim 19 is allowed.

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10. Applicant's arguments with respect to instant claims have been considered but are moot in view of the new ground(s) of rejection.

11. The references, crossed out on the attached copy of the form PTO-1449, are already cited in this application.

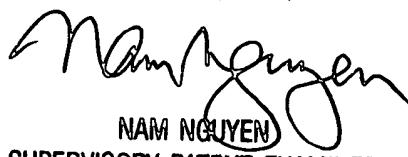
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Leyson whose telephone number is (703) 308-2647. The examiner can normally be reached on M-F(8:30-6:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (703) 308-3322. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-7718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

jl

September 23, 2001


NAM NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700